

Fig. 1

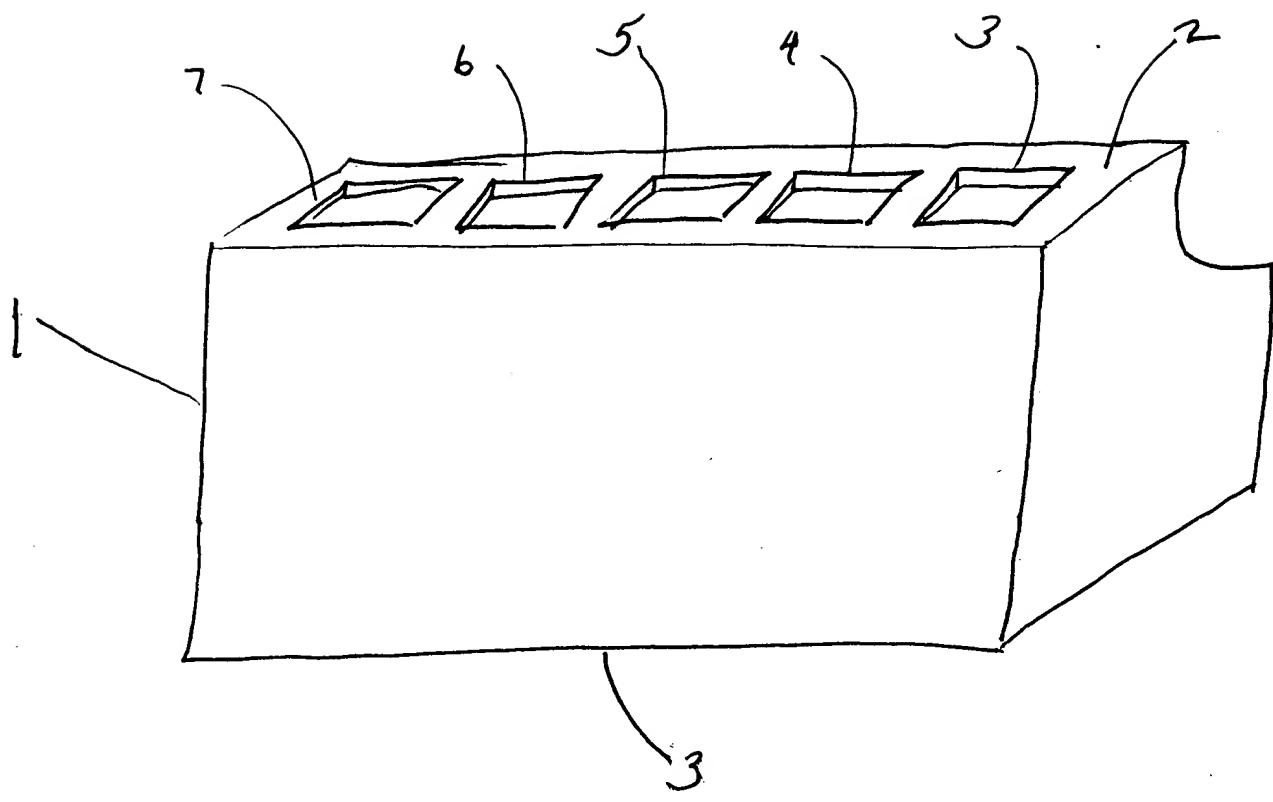
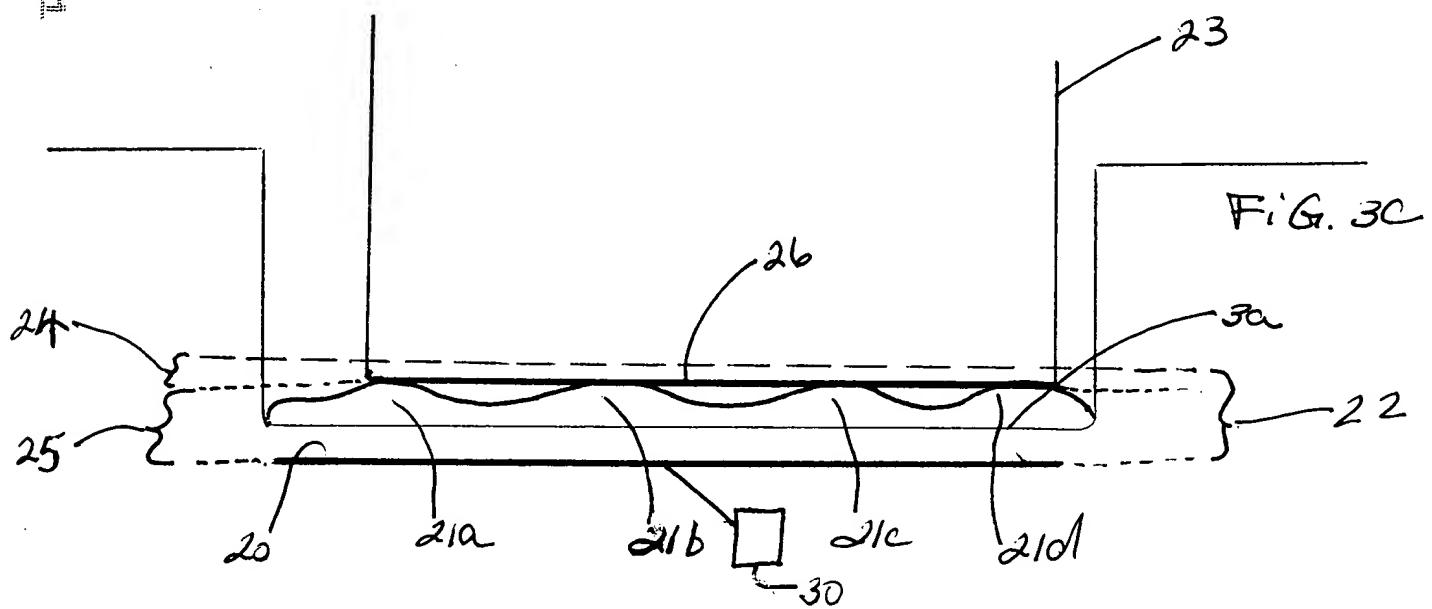
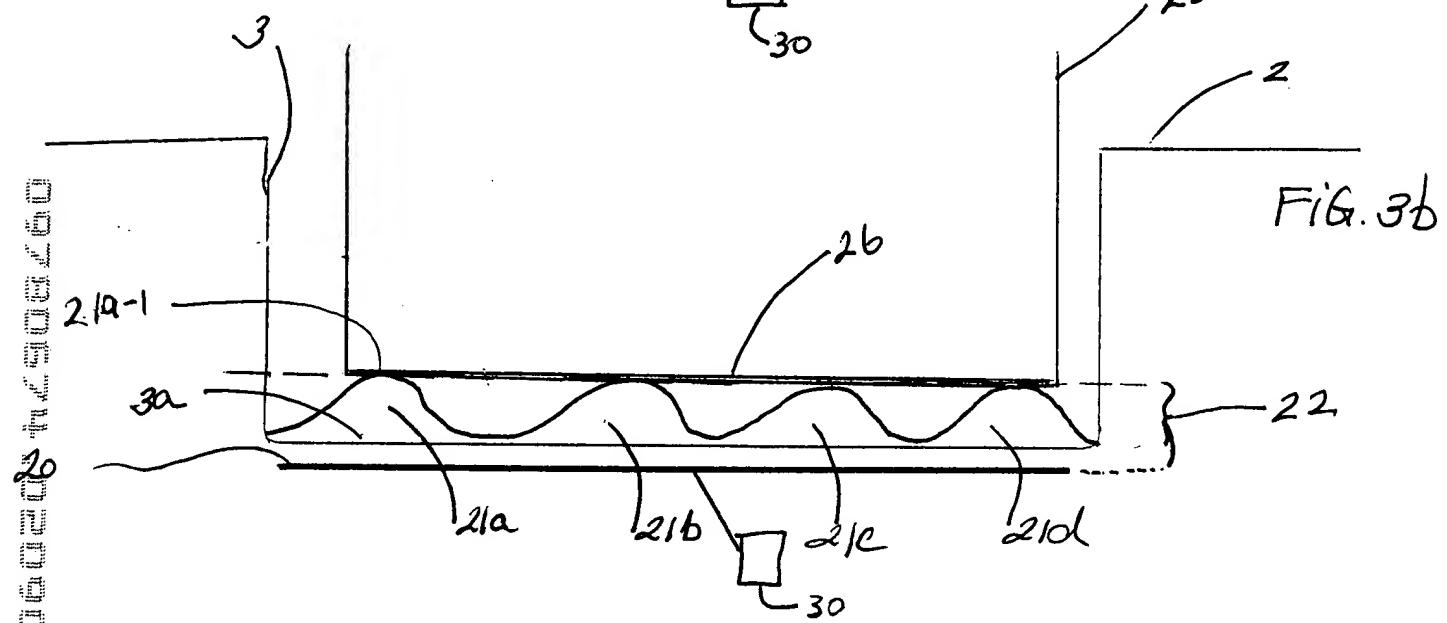
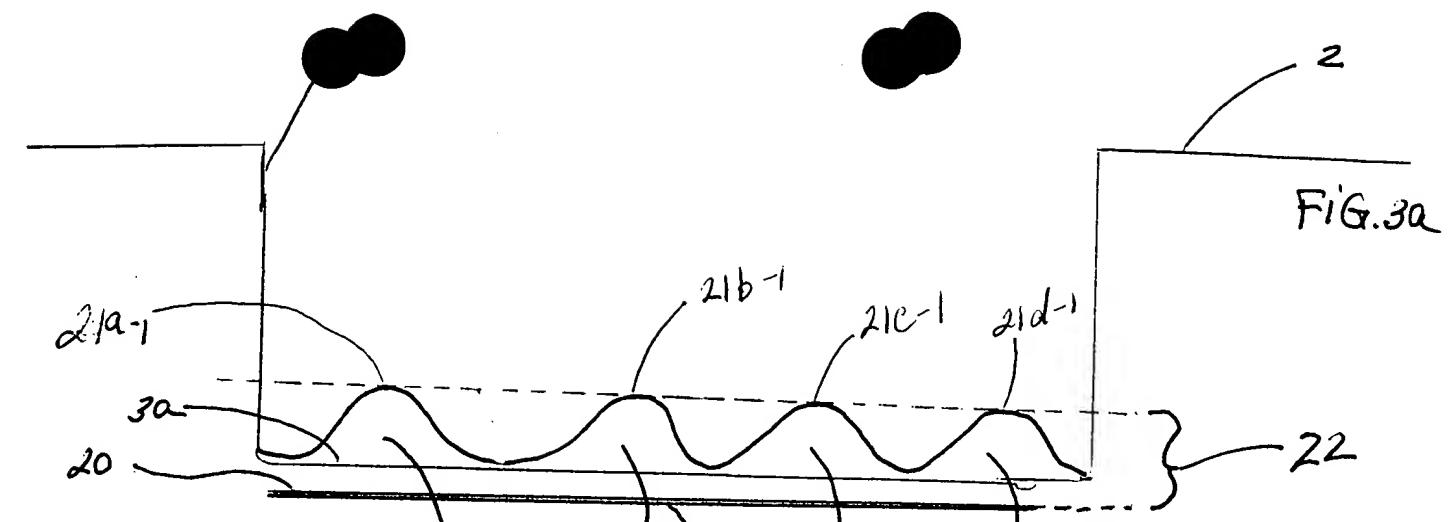


FIG. 2



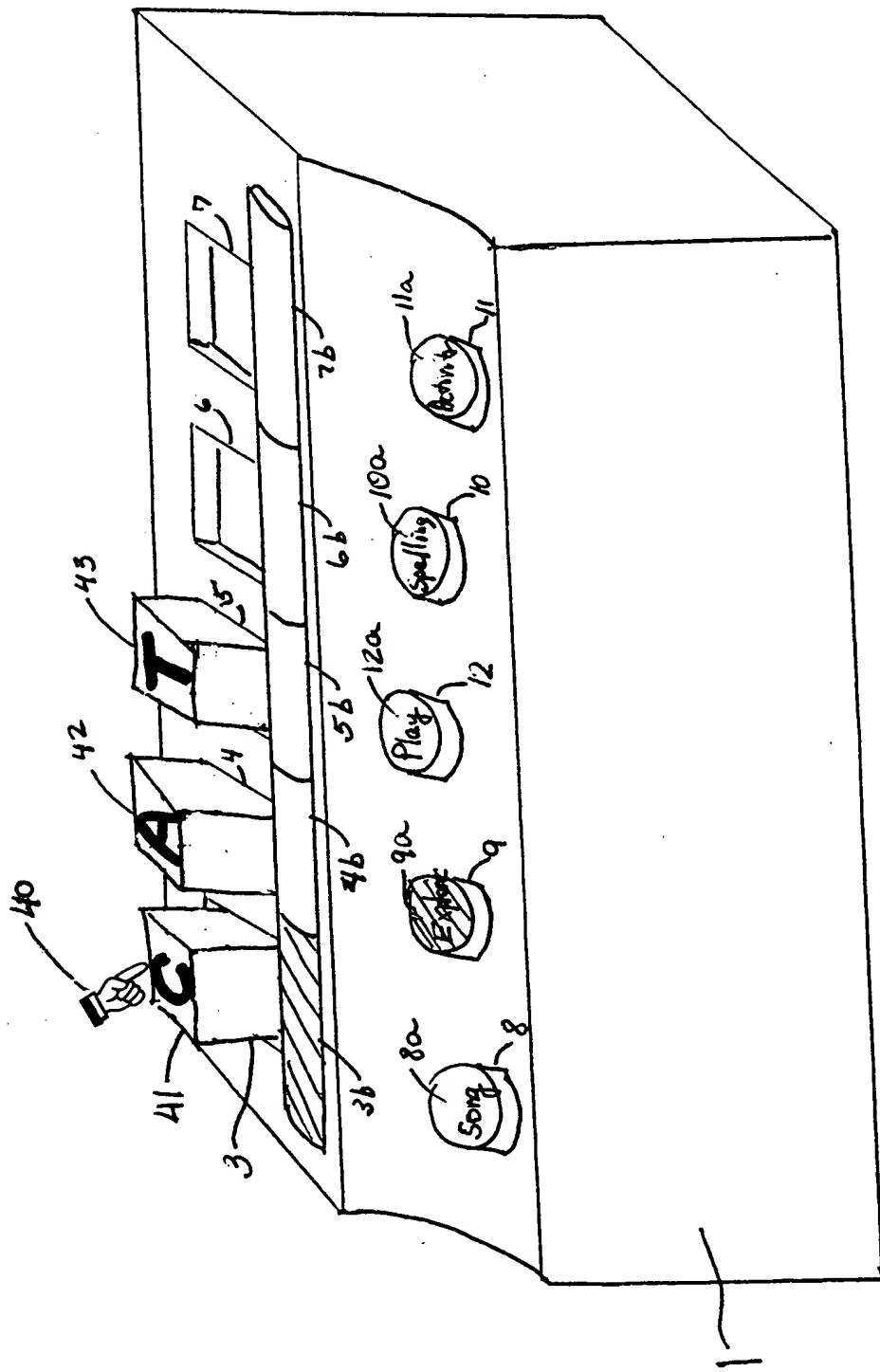


Fig. 40

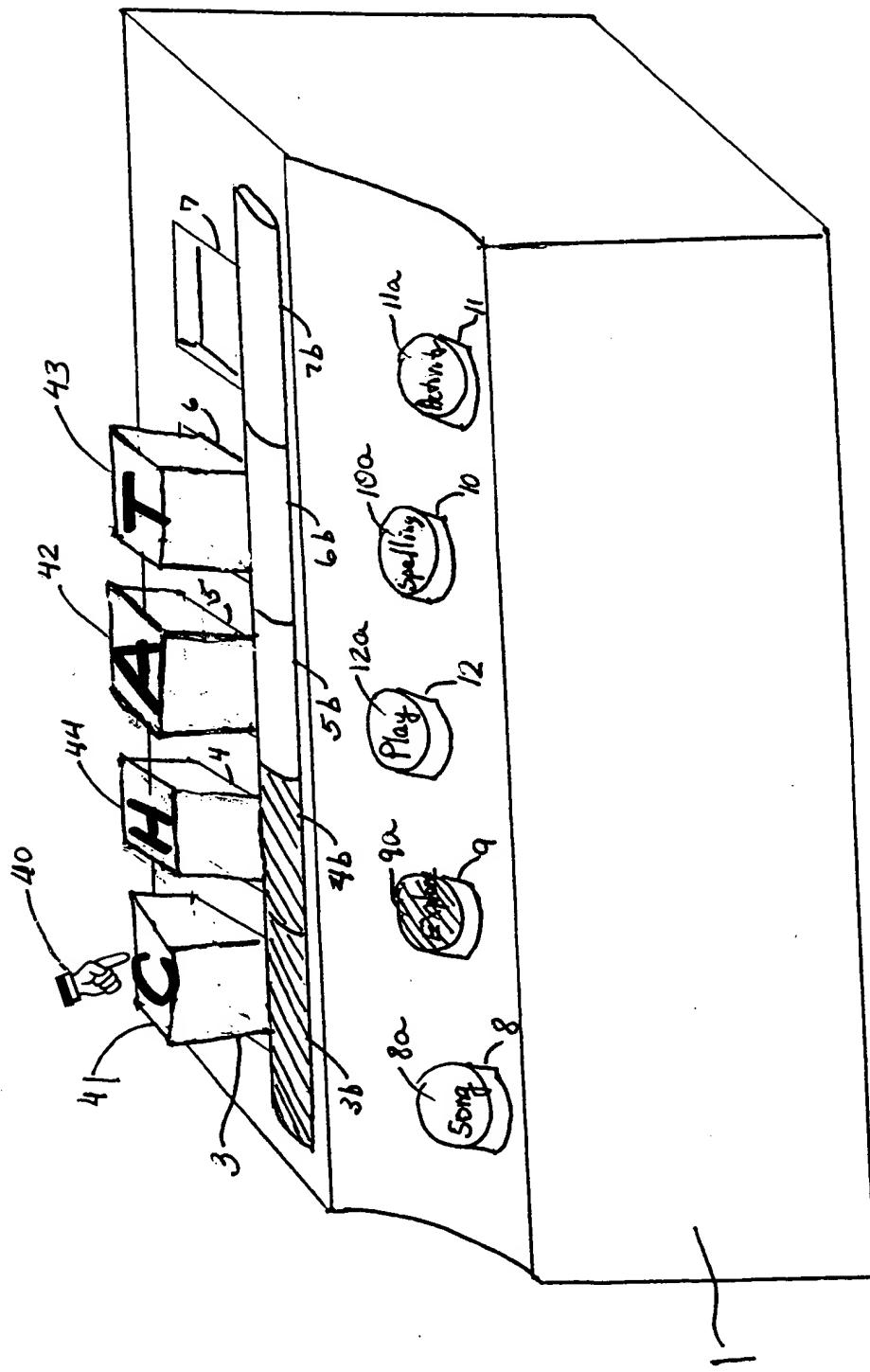


FIG. 4b

FIGURE 40 - FIGURE 40

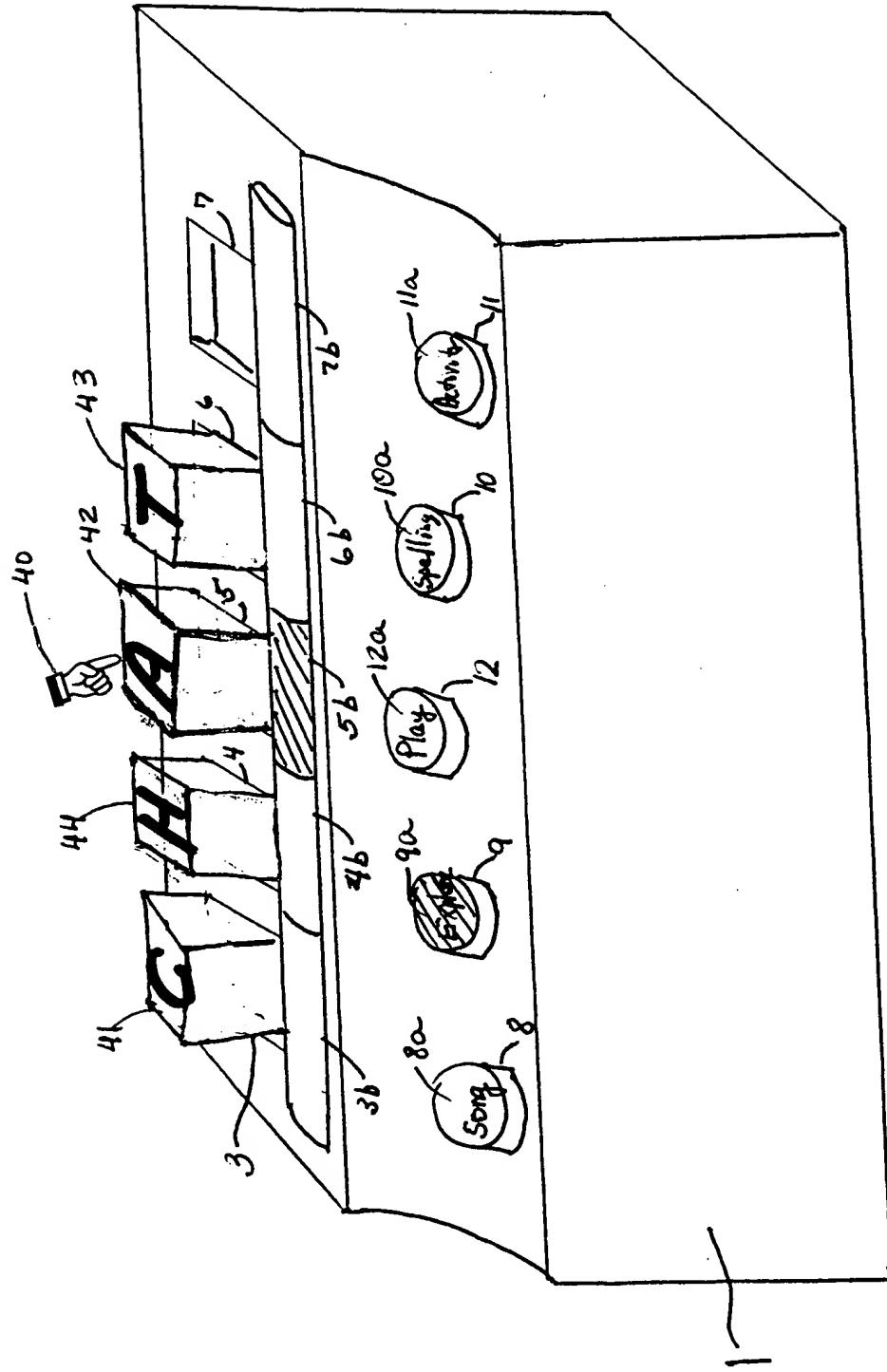


FIG. 4C

FIGURE 40: FIGURE 40

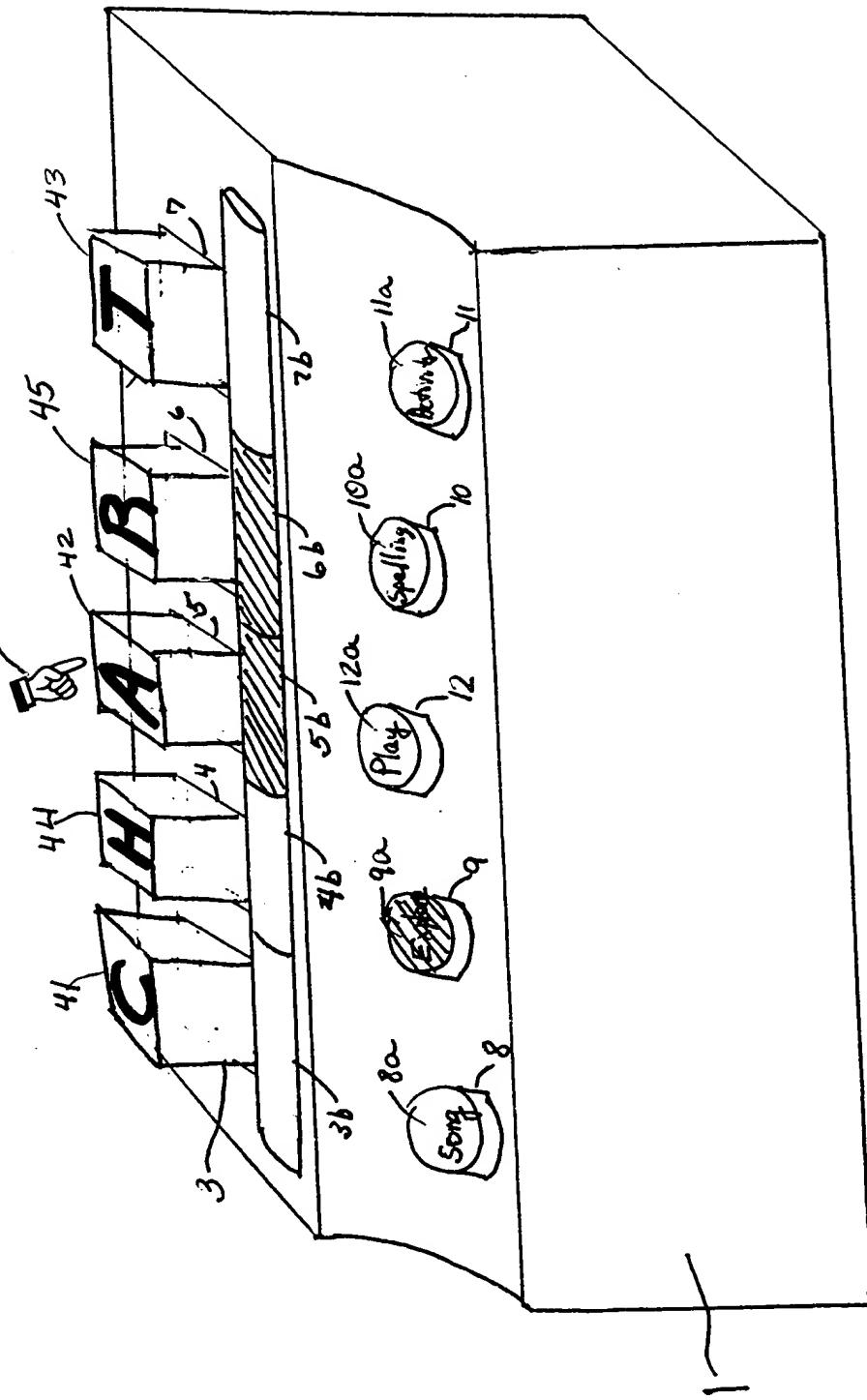


FIG. 40

FIGURE 40: FIGURE 40

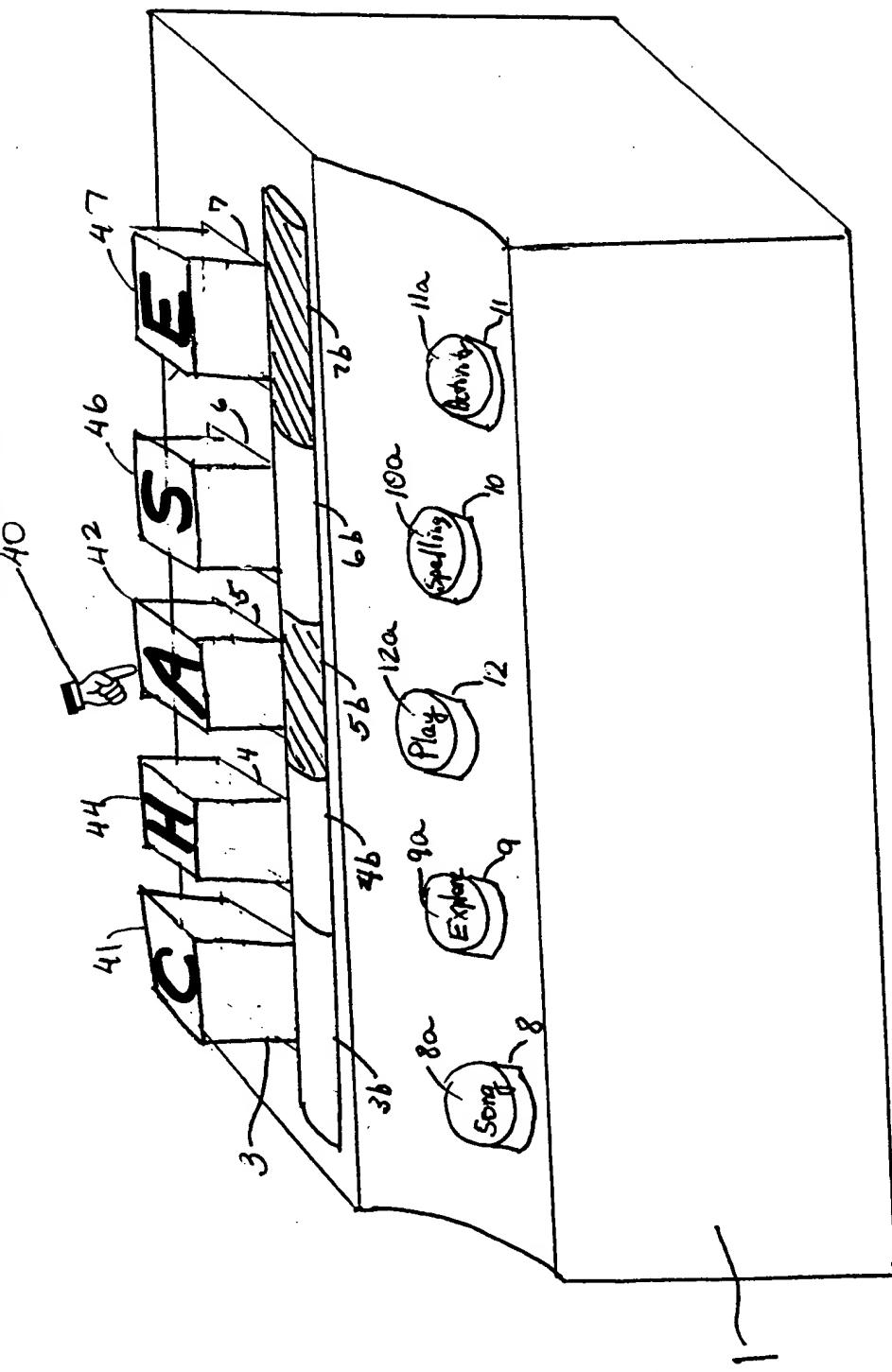


FIG. 4e

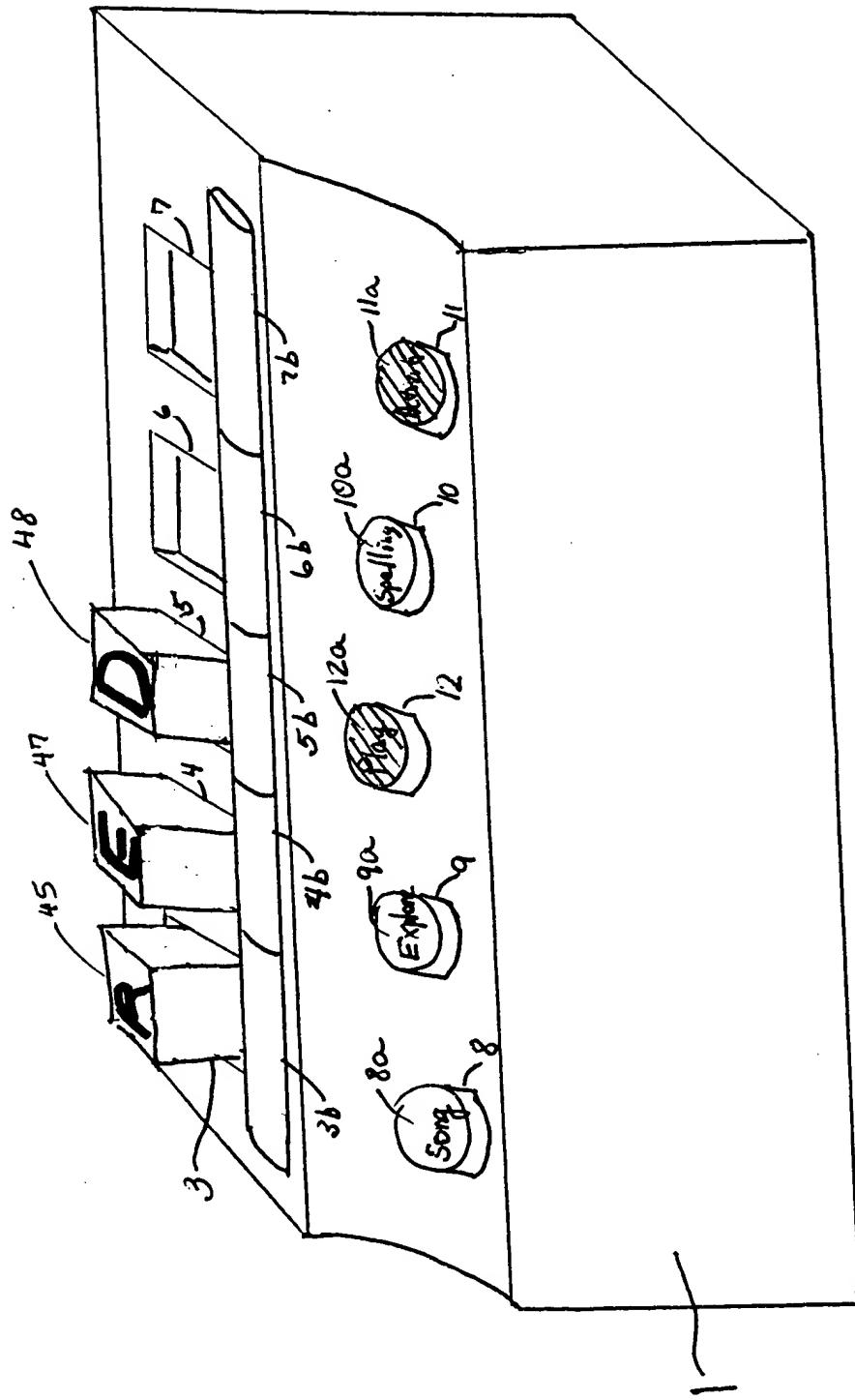


Fig. 5

48		The 44 Sounds of English	
○. silence		Consonant Sounds	
100a		23. /θ/ (the)	
100b		24. /hw/ (wheel)	
101b		25. /ng/ (ring)	
101c		Vowel Sounds	
113b		26. /ə/ (cake)	
113a		27. /ɛ/ (feet)	
119b		28. /i/ (bike)	
119a		29. /ɔ/ (boat)	
126a		30. /yʊə/ (cube)	
126b		31. /a/ (cat)	
129b		32. /e/ (bed)	
129a		33. /i/ (fish)	
45. /q/		34. /ə/ (lock)	
46. /d/ (don)		35. /u/ (duck)	
47. /x/		36. /a/ (alarm)	
48. /ər/ (store)		37. /ʌ/ (chair)	
49. /θ/ (the)		38. /ʊ/ (bird)	
50. /h/ (hat)		39. /ə/ (car)	
51. /f/ (fan)		40. /ɒ/ (ball)	
52. /v/ (vase)		41. /oɪ/ (boy)	
53. /w/ (wagon)		42. /əʊ/ (house)	
54. /j/ (jump)		43. /ʊə/ (moon)	
55. /k/ (kite)		44. /ɔə/ (book)	
56. /l/ (leaf)		45. /ɑ/ (cheese)	
57. /m/ (mop)		46. /ʃ/ (shark)	
58. /n/ (nest)		47. /zh/ (treasure)	
59. /p/ (pig)		48. /θ/ (thumb)	
60. /r/ (rock)		49. /tʃ/ (cheese)	
61. /s/ (sun)		50. /ʃ/ (shark)	
62. /t/ (top)		51. /dʒ/ (treasure)	
63. /v/ (vase)		52. /θ/ (thumb)	
64. /w/ (wagon)		53. /tʃ/ (cheese)	
65. /y/ (yo-yo)		54. /ʃ/ (shark)	
66. /z/ (zebra)		55. /dʒ/ (treasure)	
67. /d/ (dog)		56. /θ/ (thumb)	
68. /g/ (gate)		57. /ʃ/ (shark)	
69. /h/ (hat)		58. /dʒ/ (treasure)	
70. /k/ (kite)		59. /θ/ (thumb)	
71. /l/ (leaf)		60. /ʃ/ (shark)	
72. /m/ (mop)		61. /dʒ/ (treasure)	
73. /n/ (nest)		62. /θ/ (thumb)	
74. /p/ (pig)		63. /ʃ/ (shark)	
75. /r/ (rock)		64. /dʒ/ (treasure)	
76. /s/ (sun)		65. /θ/ (thumb)	
77. /t/ (top)		66. /ʃ/ (shark)	
78. /v/ (vase)		67. /dʒ/ (treasure)	
79. /w/ (wagon)		68. /θ/ (thumb)	
80. /y/ (yo-yo)		69. /ʃ/ (shark)	
81. /z/ (zebra)		70. /dʒ/ (treasure)	
82. /d/ (dog)		71. /θ/ (thumb)	
83. /g/ (gate)		72. /ʃ/ (shark)	
84. /h/ (hat)		73. /dʒ/ (treasure)	
85. /k/ (kite)		74. /θ/ (thumb)	
86. /l/ (leaf)		75. /ʃ/ (shark)	
87. /m/ (mop)		76. /dʒ/ (treasure)	
88. /n/ (nest)		77. /θ/ (thumb)	
89. /p/ (pig)		78. /ʃ/ (shark)	
90. /r/ (rock)		79. /dʒ/ (treasure)	
91. /s/ (sun)		80. /θ/ (thumb)	
92. /t/ (top)		81. /ʃ/ (shark)	
93. /v/ (vase)		82. /dʒ/ (treasure)	
94. /w/ (wagon)		83. /θ/ (thumb)	
95. /y/ (yo-yo)		84. /ʃ/ (shark)	
96. /z/ (zebra)		85. /dʒ/ (treasure)	
97. /d/ (dog)		86. /θ/ (thumb)	
98. /g/ (gate)		87. /ʃ/ (shark)	
99. /h/ (hat)		88. /dʒ/ (treasure)	
100. /k/ (kite)		89. /θ/ (thumb)	
101. /l/ (leaf)		90. /ʃ/ (shark)	
102. /m/ (mop)		91. /dʒ/ (treasure)	
103. /n/ (nest)		92. /θ/ (thumb)	
104. /p/ (pig)		93. /ʃ/ (shark)	
105. /r/ (rock)		94. /dʒ/ (treasure)	
106. /s/ (sun)		95. /θ/ (thumb)	
107. /t/ (top)		96. /ʃ/ (shark)	
108. /v/ (vase)		97. /dʒ/ (treasure)	
109. /w/ (wagon)		98. /θ/ (thumb)	
110. /y/ (yo-yo)		99. /ʃ/ (shark)	
111. /z/ (zebra)		100. /dʒ/ (treasure)	

FIG. 6

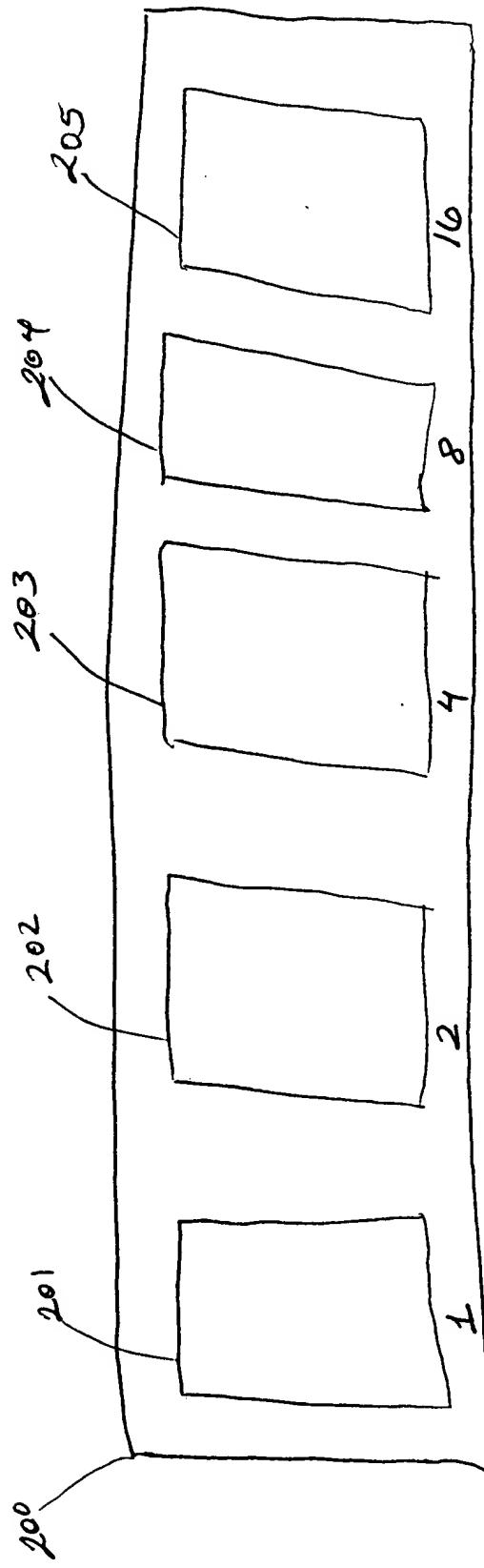


Fig. 7a

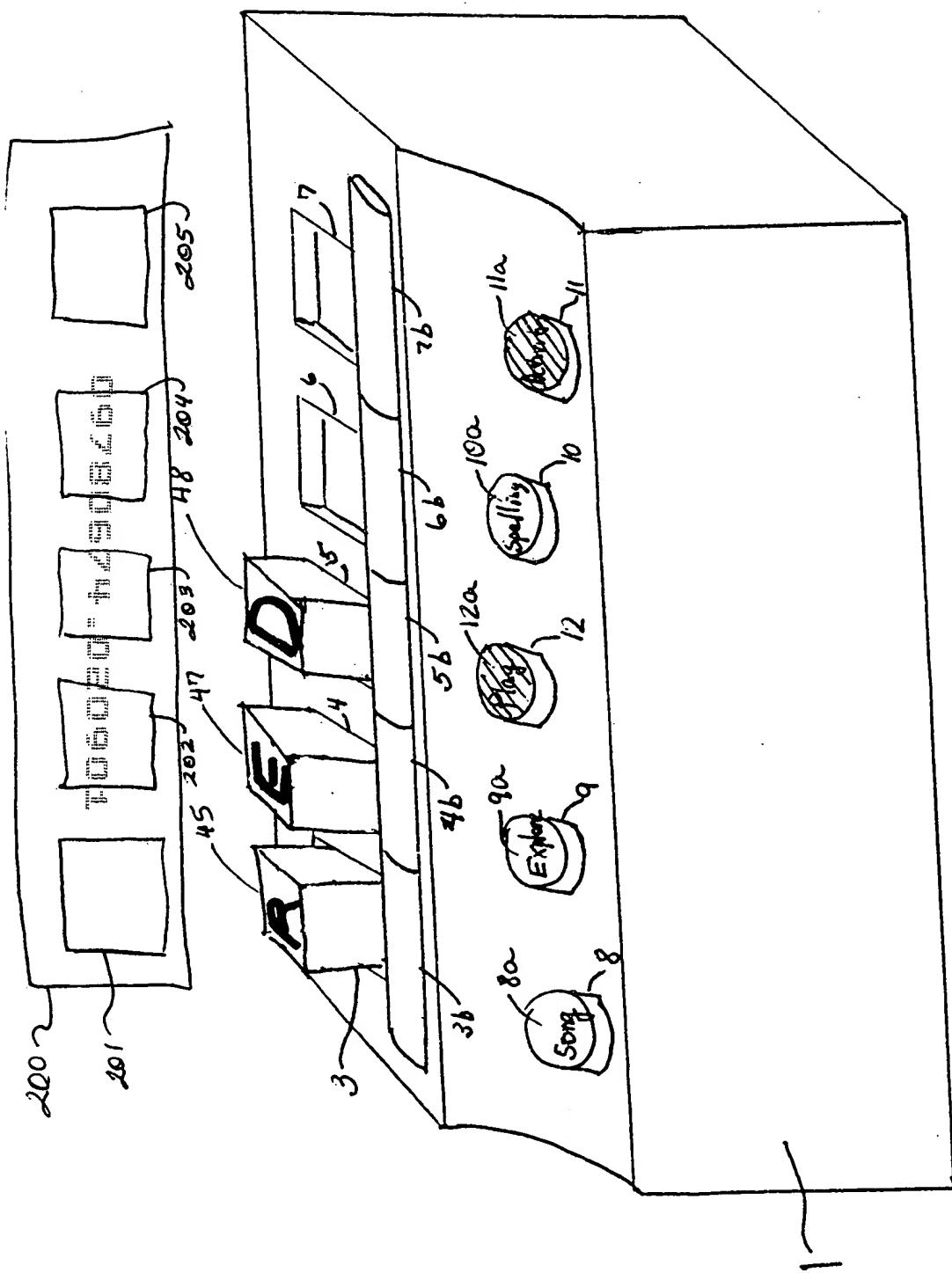


Fig. 7b

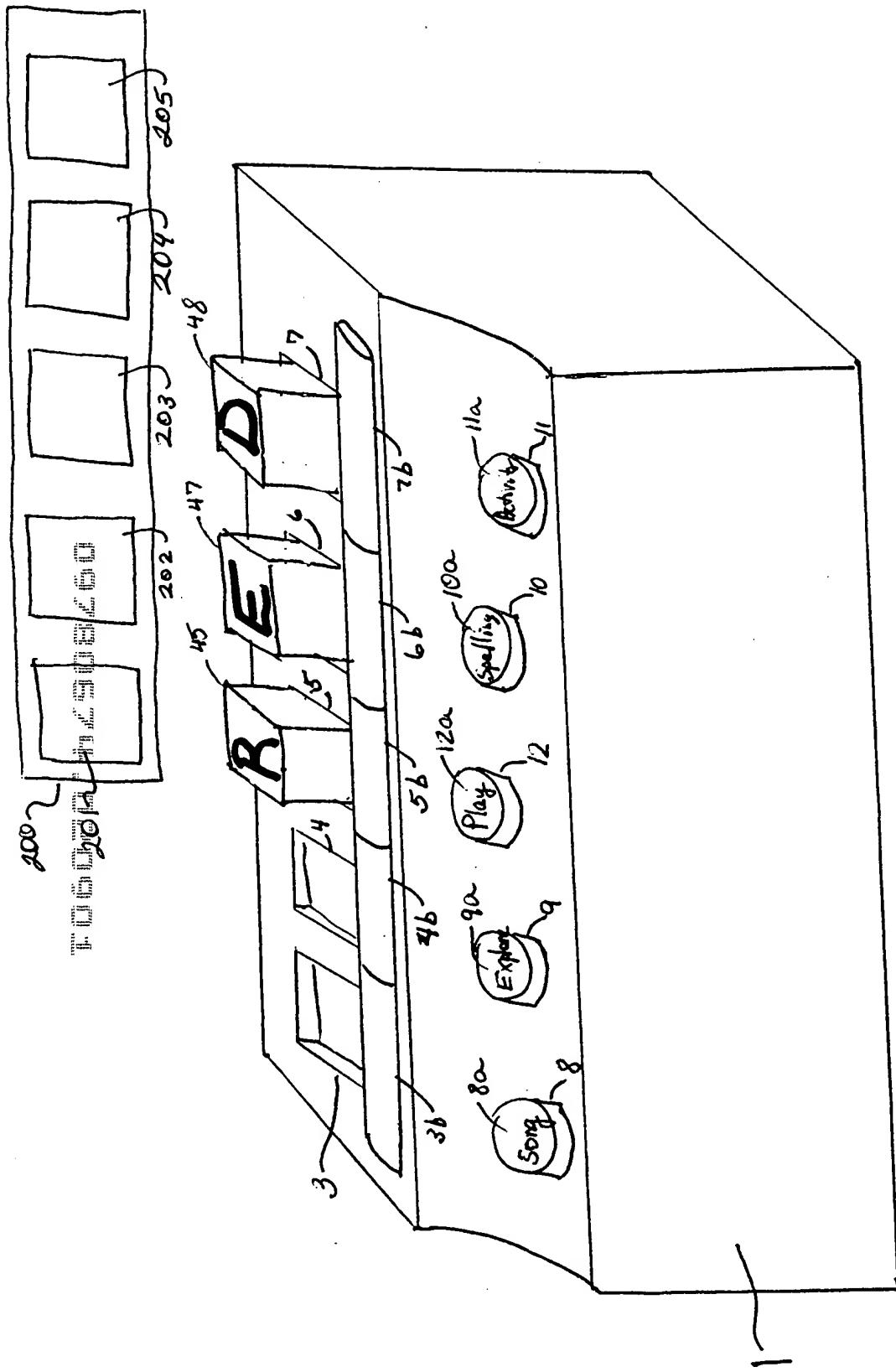


Fig. 7c

1. /worddict 2048 dict dup begin
2. /a ["a" ["26"] ["01"] true] def
3. /i ["i" ["28"] ["01"] true] def
4. /am ["am" ["31" "9"] ["01" "02"] true] def
5. /an ["an" ["31" "10"] ["01" "02"] true] def
6. /as ["as" ["31" "18"] ["01" "02"] true] def
7. /at ["at" ["31" "14"] ["01" "02"] true] def
8. /be ["be" ["1" "27"] ["01" "02"] true] def
9. /by ["by" ["1" "28"] ["01" "02"] true] def
10. /do ["do" ["2" "43"] ["01" "02"] true] def
11. /go ["go" ["4" "29"] ["01" "02"] true] def
12. /he ["he" ["5" "27"] ["01" "02"] true] def
13. /if ["if" ["33" "3"] ["01" "02"] true] def
14. /in ["in" ["33" "10"] ["01" "02"] true] def
15. /is ["is" ["33" "18"] ["01" "02"] true] def
16. /it ["it" ["33" "14"] ["01" "02"] true] def
17. /me ["me" ["9" "27"] ["01" "02"] true] def
18. /my ["my" ["9" "28"] ["01" "02"] true] def
19. /no ["know" ["10" "29"] ["01" "02"] true] def
20. /of ["of" ["36" "15"] ["01" "02"] true] def
21. /on ["on" ["34" "10"] ["01" "02"] true] def
22. /or ["or" ["29" "12"] ["01" "02"] true] def
23. /ox ["ox" ["34" "47"] ["01" "02"] true] def
24. /so ["sew" ["13" "29"] ["01" "02"] false] def
25. /to ["to" ["14" "43"] ["01" "02"] true] def
26. /up ["up" ["35" "11"] ["01" "02"] true] def
27. /us ["us" ["35" "13"] ["01" "02"] true] def
28. /we ["we" ["16" "27"] ["01" "02"] true] def

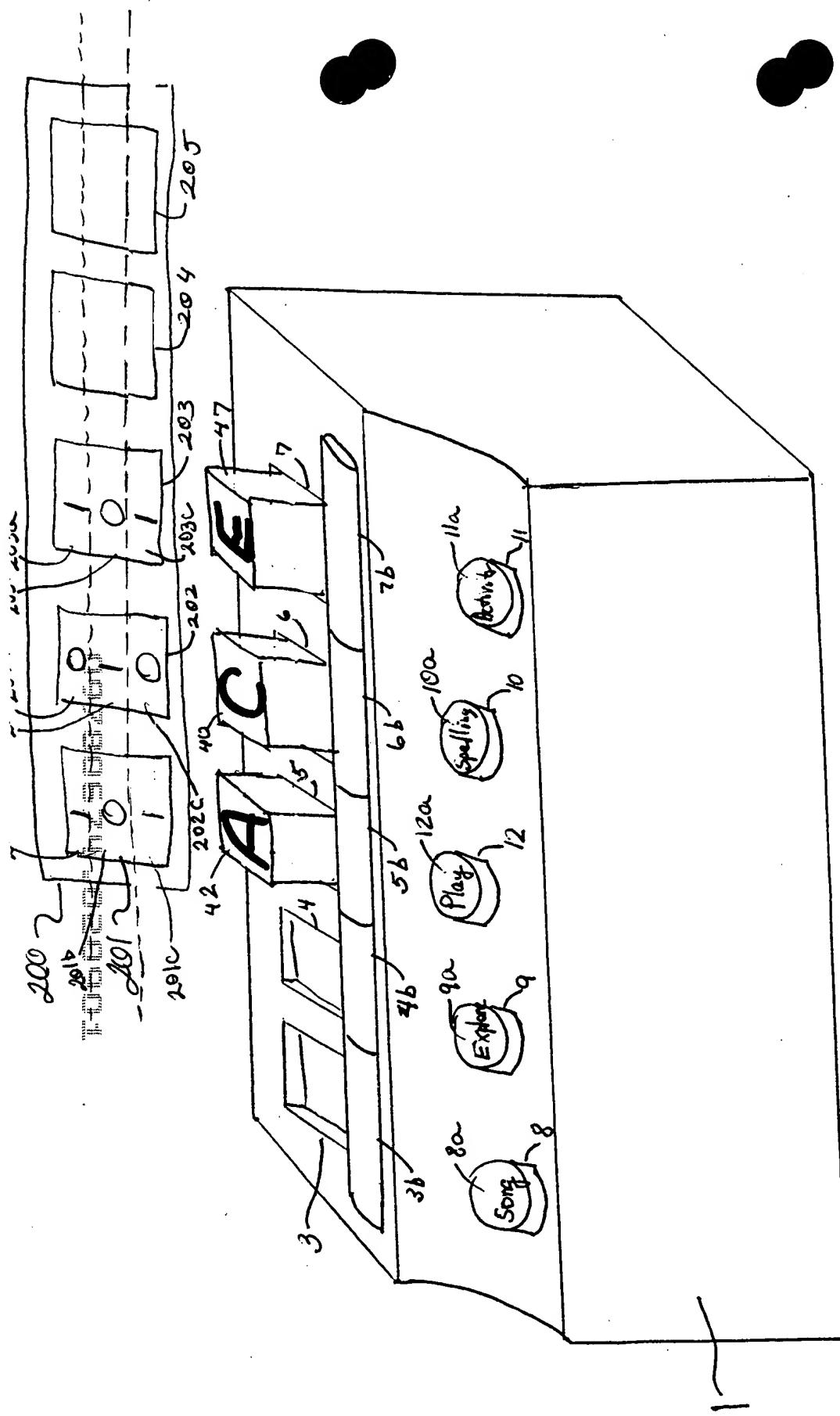
301
300
302
303
304
305
306
307
308
309

29. /ace ["ace" ["26" "13" "0"] ["05" "02" "05"] true] def
30. /act ["act" ["31" "7" "14"] ["01" "02" "04"] true] def
31. /age ["age" ["26" "6" "0"] ["05" "02" "05"] true] def
32. /ago ["ago" ["36" "4" "29"] ["01" "02" "04"] true] def
33. /air ["air" ["37" "37" "12"] ["03" "03" "04"] true] def
34. /all ["all" ["40" "8" "8"] ["01" "02" "04"] true] def
35. /and ["and" ["31" "10" "2"] ["01" "02" "04"] true] def
36. /ant ["ant" ["31" "10" "14"] ["01" "02" "04"] true] def
37. /any ["any" ["32" "10" "27"] ["01" "02" "04"] true] def
38. /ape ["ape" ["26" "11" "0"] ["05" "02" "05"] true] def
39. /are ["are" ["39" "12" "0"] ["03" "03" "04"] true] def
40. /arm ["arm" ["39" "12" "9"] ["03" "03" "04"] true] def
41. /art ["art" ["39" "12" "14"] ["03" "03" "04"] true] def
42. /ask ["ask" ["31" "13" "7"] ["01" "02" "04"] true] def
43. /ate ["ate" ["26" "14" "0"] ["05" "02" "05"] true] def
44. /bad ["bad" ["1" "31" "2"] ["01" "02" "04"] true] def
45. /bag ["bag" ["1" "31" "4"] ["01" "02" "04"] true] def
46. /bar ["bar" ["1" "39" "12"] ["01" "02" "04"] true] def

47. /bat ["bat" ["1" "31" "14"] ["01" "02" "04"] true] def
 48. /bed ["bed" ["1" "32" "2"] ["01" "02" "04"] true] def
 49. /bee ["bee" ["1" "27" "27"] ["01" "06" "06"] true] def
 50. /bet ["bet" ["1" "32" "14"] ["01" "02" "04"] true] def
 51. /big ["big" ["1" "33" "4"] ["01" "02" "04"] true] def
 52. /bit ["bit" ["1" "33" "14"] ["01" "02" "04"] true] def
 53. /bow ["bow" ["1" "29" "29"] ["01" "06" "06"] true] def
 54. /box ["box" ["1" "34" "47"] ["01" "02" "04"] true] def
 55. /boy ["boy" ["1" "41" "41"] ["01" "06" "06"] true] def
 56. /bud ["bud" ["1" "35" "2"] ["01" "02" "04"] true] def
 57. /bug ["bug" ["1" "35" "4"] ["01" "02" "04"] true] def
 58. /bun ["bun" ["1" "35" "10"] ["01" "02" "04"] true] def
 59. /bus ["bus" ["1" "35" "13"] ["01" "02" "04"] true] def
 60. /but ["but" ["1" "35" "14"] ["01" "02" "04"] true] def
 61. /buy ["by" ["1" "28" "28"] ["01" "06" "06"] true] def
 62. /bye ["by" ["1" "28" "0"] ["01" "06" "06"] true] def
 63. /cab ["cab" ["7" "31" "1"] ["01" "02" "04"] true] def
 64. /can ["can" ["7" "31" "10"] ["01" "02" "04"] true] def
 65. /cap ["cap" ["7" "31" "11"] ["01" "02" "04"] true] def
 66. /car ["car" ["7" "39" "12"] ["01" "02" "04"] true] def
 67. /cat ["cat" ["7" "31" "14"] ["01" "02" "04"] true] def
 68. /cop ["cop" ["7" "34" "11"] ["01" "02" "04"] true] def
 69. /cow ["cow" ["7" "42" "42"] ["01" "06" "06"] true] def
 70. /cry ["cry" ["7" "12" "28"] ["01" "02" "04"] true] def
 71. /cup ["cup" ["7" "36" "11"] ["01" "02" "04"] true] def
 72. /cut ["cut" ["7" "36" "14"] ["01" "02" "04"] true] def
 73. /dad ["dad" ["2" "31" "2"] ["01" "02" "04"] true] def
 74. /day ["day" ["2" "26" "26"] ["01" "06" "06"] true] def
 75. /den ["den" ["2" "32" "10"] ["01" "02" "04"] true] def
 76. /did ["did" ["2" "33" "2"] ["01" "02" "04"] true] def
 77. /dig ["dig" ["2" "33" "4"] ["01" "02" "04"] true] def
 78. /dog ["dog" ["2" "40" "4"] ["01" "02" "04"] true] def
 79. /dot ["dot" ["2" "34" "14"] ["01" "02" "04"] true] def
 80. /dry ["dry" ["2" "12" "28"] ["01" "02" "04"] true] def
 81. /ear ["ear" ["27" "27" "12"] ["03" "03" "04"] true] def
 82. /eat ["eat" ["27" "27" "14"] ["03" "03" "04"] true] def
 83. /egg ["egg" ["32" "4" "4"] ["01" "06" "06"] true] def
 84. /end ["end" ["32" "10" "2"] ["01" "02" "04"] true] def
 85. /eye ["eye" ["28" "28" "0"] ["04" "05" "07"] true] def
 86. /fan ["fan" ["3" "31" "10"] ["01" "02" "04"] true] def
 87. /far ["far" ["3" "39" "12"] ["01" "02" "04"] true] def
 88. /fat ["fat" ["3" "31" "14"] ["01" "02" "04"] true] def
 89. /fed ["fed" ["3" "32" "2"] ["01" "02" "04"] true] def
 90. /few ["few" ["3" "30" "30"] ["01" "06" "06"] true] def
 91. /fit ["fit" ["3" "33" "14"] ["01" "02" "04"] true] def
 92. /fix ["fix" ["3" "33" "47"] ["01" "02" "04"] true] def
 93. /fly ["fly" ["3" "8" "28"] ["01" "02" "04"] true] def
 94. /for ["for" ["3" "29" "12"] ["01" "02" "04"] true] def
 95. /fox ["fox" ["3" "34" "47"] ["01" "02" "04"] true] def
 96. /fry ["fry" ["3" "12" "28"] ["01" "02" "04"] true] def
 97. /fun ["fun" ["3" "36" "10"] ["01" "02" "04"] true] def
 98. /fur ["fur" ["3" "38" "12"] ["01" "02" "04"] true] def
 99. /gap ["gap" ["4" "31" "11"] ["01" "02" "04"] true] def
 100. /get ["get" ["4" "32" "14"] ["01" "02" "04"] true] def

101./gnu ["gnu" ["0" "10" "43"] ["03" "02" "04"] true] def
 102./got ["got" ["4" "34" "14"] ["01" "02" "04"] true] def
 103./gum ["gum" ["4" "35" "9"] ["01" "02" "04"] true] def
 104./guy ["guy" ["4" "28" "28"] ["01" "06" "06"] true] def
 105./had ["had" ["5" "31" "2"] ["01" "02" "04"] true] def
 106./ham ["ham" ["5" "31" "9"] ["01" "02" "04"] true] def
 107./has ["has" ["5" "31" "18"] ["01" "02" "04"] true] def
 108./hat ["hat" ["5" "31" "14"] ["01" "02" "04"] true] def
 109./hay ["hay" ["5" "26" "26"] ["01" "06" "06"] true] def
 110./hen ["hen" ["5" "32" "10"] ["01" "02" "04"] true] def
 111./her ["her" ["5" "38" "12"] ["01" "02" "04"] true] def
 112./hey ["hay" ["5" "26" "26"] ["01" "06" "06"] false] def
 113./hid ["hid" ["5" "33" "2"] ["01" "02" "04"] true] def
 114./him ["him" ["5" "33" "9"] ["01" "02" "04"] true] def
 115./hip ["hip" ["5" "33" "11"] ["01" "02" "04"] true] def
 116./his ["his" ["5" "33" "18"] ["01" "02" "04"] true] def
 117./hit ["hit" ["5" "33" "14"] ["01" "02" "04"] true] def
 118./hog ["hog" ["5" "34" "4"] ["01" "02" "04"] true] def
 119./hop ["hop" ["5" "34" "11"] ["01" "02" "04"] true] def
 120./hot ["hot" ["5" "34" "14"] ["01" "02" "04"] true] def
 121./how ["how" ["5" "42" "42"] ["01" "06" "06"] true] def
 122./hug ["hug" ["5" "35" "4"] ["01" "02" "04"] true] def
 123./hum ["hum" ["5" "35" "9"] ["01" "02" "04"] true] def
 124./hut ["hut" ["5" "35" "14"] ["01" "02" "04"] true] def
 125./ice ["ice" ["28" "13" "0"] ["05" "02" "05"] true] def
 126./ink ["ink" ["33" "10" "7"] ["01" "02" "04"] true] def
 127./jam ["jam" ["6" "31" "9"] ["01" "02" "04"] true] def
 128./jar ["jar" ["6" "39" "12"] ["01" "06" "04"] true] def
 129./jaw ["jaw" ["6" "40" "40"] ["01" "05" "04"] true] def
 130./jet ["jet" ["6" "32" "14"] ["01" "02" "04"] true] def
 131./job ["job" ["6" "40" "1"] ["01" "02" "04"] true] def
 132./jog ["jog" ["6" "40" "4"] ["01" "02" "04"] true] def
 133./joy ["joy" ["6" "41" "41"] ["01" "06" "06"] true] def
 134./jug ["jug" ["6" "35" "4"] ["01" "02" "04"], true] def
 135./key ["key" ["7" "27" "27"] ["01" "06" "06"] true] def
 136./kid ["kid" ["7" "33" "2"] ["01" "02" "04"] true] def
 137./kit ["kit" ["7" "33" "14"] ["01" "02" "04"] true] def
 138./lab ["lab" ["8" "31" "1"] ["01" "02" "04"] true] def
 139./lay ["lay" ["8" "26" "26"] ["01" "06" "06"] true] def
 140./leg ["leg" ["8" "32" "4"] ["01" "02" "04"] true] def
 141./let ["let" ["8" "32" "14"] ["01" "02" "04"] true] def
 142./lid ["lid" ["8" "33" "2"] ["01" "02" "04"] true] def
 143./lie ["lie" ["8" "28" "0"] ["01" "06" "06"] true] def
 144./lip ["lip" ["8" "33" "11"] ["01" "02" "04"] true] def
 145./log ["log" ["8" "34" "4"] ["01" "02" "04"] true] def
 146./lot ["lot" ["8" "34" "14"] ["01" "02" "04"] true] def
 147./mad ["mad" ["9" "31" "2"] ["01" "02" "04"] true] def
 148./man ["man" ["9" "31" "10"] ["01" "02" "04"] true] def
 149./map ["map" ["9" "31" "11"] ["01" "02" "04"] true] def
 150./mat ["mat" ["9" "31" "14"] ["01" "02" "04"] true] def
 151./may ["may" ["9" "26" "26"] ["01" "06" "06"] true] def
 152./men ["men" ["9" "32" "10"] ["01" "02" "04"] true] def
 153./met ["met" ["9" "32" "14"] ["01" "02" "04"] true] def
 154./mix ["mix" ["9" "33" "47"] ["01" "02" "04"] true] def

155./mom ["mom" ["9" "34" "9"] ["01" "02" "04"] true] def
 156./moo ["moo" ["9" "43" "43"] ["01" "06" "06"] true] def
 157./mop ["mop" ["9" "34" "11"] ["01" "02" "04"] true] def
 158./mud ["mud" ["9" "35" "2"] ["01" "02" "04"] true] def
 159./mug ["mug" ["9" "35" "4"] ["01" "02" "04"] true] def
 160./nap ["nap" ["10" "31" "11"] ["01" "02" "04"] true] def
 161./net ["net" ["10" "32" "14"] ["01" "02" "04"] true] def
 162./new ["new" ["10" "43" "43"] ["01" "06" "06"] true] def
 163./nod ["nod" ["10" "34" "2"] ["01" "02" "04"] true] def
 164./not ["not" ["10" "34" "14"] ["01" "02" "04"] true] def
 165./now ["now" ["10" "42" "42"] ["01" "06" "06"] true] def
 166./nut ["nut" ["10" "35" "14"] ["01" "02" "04"] true] def
 167./off ["off" ["34" "3" "3"] ["01" "06" "06"] true] def
 168./oil ["oil" ["41" "41" "8"] ["03" "03" "04"] true] def
 169./old ["old" ["29" "8" "2"] ["01" "02" "04"] true] def
 170./one ["one" ["16" "10" "0"] ["01" "02" "04"] true] def
 171./our ["our" ["42" "42" "12"] ["03" "03" "04"] true] def
 172./out ["out" ["42" "42" "14"] ["03" "03" "04"] true] def
 173./owl ["owl" ["42" "42" "8"] ["01" "02" "04"] true] def
 174./own ["own" ["29" "29" "10"] ["01" "02" "04"] true] def
 175./pad ["pad" ["11" "31" "2"] ["01" "02" "04"] true] def
 176./pal ["pal" ["11" "31" "8"] ["01" "02" "04"] true] def
 177./pan ["pan" ["11" "31" "10"] ["01" "02" "04"] true] def
 178./pat ["pat" ["11" "31" "14"] ["01" "02" "04"] true] def
 179./pea ["pea" ["11" "27" "27"] ["01" "06" "06"] true] def
 180./pen ["pen" ["11" "32" "10"] ["01" "02" "04"] true] def
 181./pet ["pet" ["11" "32" "14"] ["01" "02" "04"] true] def
 182./pie ["pie" ["11" "28" "28"] ["01" "06" "06"] true] def
 183./pig ["pig" ["11" "33" "4"] ["01" "02" "04"] true] def
 184./pin ["pin" ["11" "33" "10"] ["01" "02" "04"] true] def
 185./pit ["pit" ["11" "33" "14"] ["01" "02" "04"] true] def
 186./pop ["pop" ["11" "34" "11"] ["01" "02" "04"] true] def
 187./pot ["pot" ["11" "34" "14"] ["01" "02" "04"] true] def
 188./put ["put" ["11" "36" "14"] ["01" "02" "04"] true] def
 189./rag ["rag" ["12" "31" "8"] ["01" "02" "04"] true] def
 190./ram ["ram" ["12" "31" "9"] ["01" "02" "04"] true] def
 191./ran ["ran" ["12" "31" "10"] ["01" "02" "04"] true] def
 192./rap ["rap" ["12" "31" "11"] ["01" "02" "04"] true] def
 193./rat ["rat" ["12" "31" "14"] ["01" "02" "04"] true] def
 194./raw ["raw" ["12" "34" "34"] ["01" "06" "06"] true] def
 195./ray ["ray" ["12" "26" "26"] ["01" "06" "06"] true] def
 196./red ["red" ["12" "31" "2"] ["01" "02" "04"] true] def
 197./rib ["rib" ["12" "33" "1"] ["01" "02" "04"] true] def
 198./rid ["rid" ["12" "33" "2"] ["01" "02" "04"] true] def
 199./rip ["rip" ["12" "33" "11"] ["01" "02" "04"] true] def
 200./rod ["rod" ["12" "34" "2"] ["01" "02" "04"] true] def
 201./rot ["rot" ["12" "34" "14"] ["01" "02" "04"] true] def
 202./row ["row" ["12" "29" "29"] ["01" "06" "06"] true] def
 203./rub ["rub" ["12" "35" "1"] ["01" "02" "04"] true] def
 204./rug ["rug" ["12" "35" "4"] ["01" "02" "04"] true] def
 205./run ["run" ["12" "35" "10"] ["01" "02" "04"] true] def
 206./sad ["sad" ["13" "31" "2"] ["01" "02" "04"] true] def
 207./sat ["sat" ["13" "31" "14"] ["01" "02" "04"] true] def
 208./saw ["saw" ["13" "40" "40"] ["01" "06" "06"] true] def



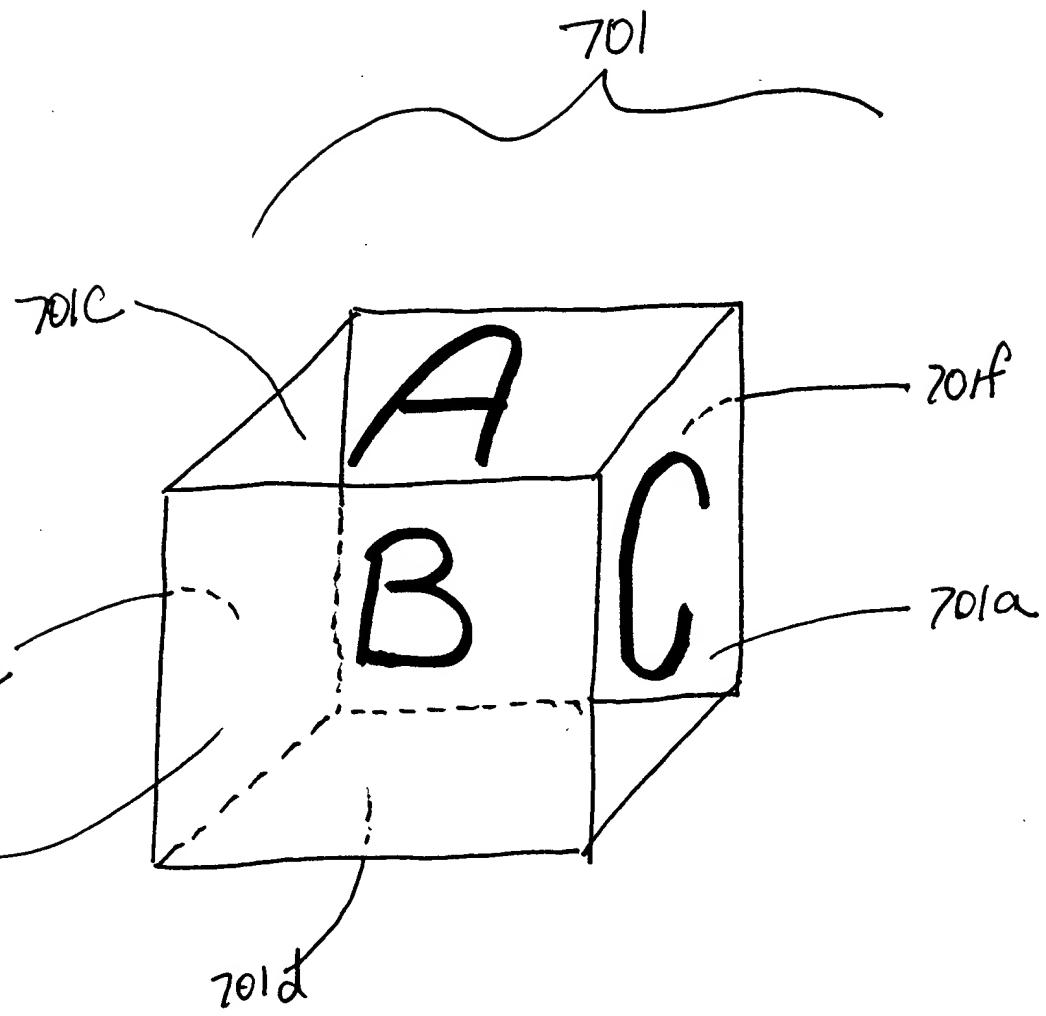


FIG. 10

Create virtual word with the letters
in the block stations
400

(Pass 1)
Shift through each letter of the virtual word:
assign each letter its normal sound;
light the block station for that letter.
401

(Pass 2)
Find each consonant
in the virtual word
402a

If the letter preceding a consonant is also a consonant,
and if the two consonants are the same consonant:
assign first consonant the silence phoneme #0;
allow second consonant to default to its normal sound;
light block stations for both consonants.
402b

(Pass 3)
If the virtual word has the letter 'h', and
if the letter 'c' immediately precedes the letter 'h':
assign the /ch/ phoneme #19 to both the 'c' and the 'h';
light block stations for both 'c' and 'h'.
403

(Pass 4)
If the virtual word has the letter 't',
if the letter immediately preceding the letter 't' is the letter 'h',
and if the letter immediately preceding the letter 'h' is the letter 'g':
assign the silence phoneme #0 to both the 'g' and 'h' block stations;
allow the 't' letter to default to its normal sound;
light all three block stations for 'g', 'h', and 't'.
404

405

FIG. 11a

(Pass 5)

If the virtual word has the letter 'g', and
if letter immediately following the 'g', is 'e' or 'i':
assign the letter 'g' the /j/ phoneme #6;
light both block stations for 'g', and for the 'e' or 'i'.

405

(Pass 6)

If the virtual word has the letter 'c', and
if the letter immediately following the letter 'c', is 'e' or 'i':
assign the letter 'c' the /s/ phoneme #13;
light both block stations for 'g', and for the 'e' or 'i'.

406

(Pass 7)

If 'k' is the last letter of the virtual word, and
if the letter 'k' is immediately preceded by the letter 'c':
assign the /k/ phoneme #7 to both the 'k' and the 'c';
light both the 'k' and the 'c' block stations.

407

(Pass 8)

If 'k' is the first letter of the virtual word, and
if the letter 'k' is followed by the letter 'n':
assign the letter 'k' the silence phoneme #0;
light both the 'k' and the 'n' block stations.

408

(Pass 9)

If 'w' is the first letter of the virtual word, and
if the letter 'r' immediately follows the letter 'w':
assign the 'w' the silence phoneme #0;
light both the 'w' and the 'r' block stations.

409

410

(Pass 10)

If the virtual word has the letter 'e', and
if a second letter 'e' precedes or follows the first letter 'e';
assign both letters 'e' the /ē/ phoneme #27;
light the block stations for both 'e' letters.

410

(Pass 11)

If the virtual word has the letter 'r', and
if the letter 'r' is immediately preceded by a vowel, then:
if the vowel is the letter 'i', assign the letter 'i' the /ū/ phoneme #38;
else if the vowel is the letter 'u', assign the letter 'u' the /ū/ phoneme #38;
else if the vowel is the letter 'e', assign the letter 'e' the /ū/ phoneme #38;
else if the vowel is the letter 'a', assign the letter 'a' the /ä/ phoneme #39;
else if the vowel is the letter 'o', assign the letter 'o' the /ö/ phoneme #48;
light the block stations for the vowel and the letter 'r'.

411

(Pass 12)

If the virtual word has the letter 'r', and
if the letter 'r' is immediately preceded by the letter 'a' or the letter 'o', and
if the letter 'r' is immediately followed by the letter 'e':
assign the letter 'e' the silence phoneme #0;
if the letter preceding the letter 'r' is the letter 'a', then assign the letter 'a' the /ä/
phoneme #37;
else if the letter preceding the letter 'r' is the letter 'o', then assign the letter 'o' the /ö/
phoneme #48;
light the block stations for the letter 'r', and 'e', and for the letters 'a' or 'o'.

412

(Pass 13)

If the virtual word ends in the letter 'y', and
if the virtual word has no vowels:
assign the letter 'y' the /i/ phoneme #28;
else if the virtual word ends in the letter 'y', and
if the virtual word has at least one vowel:
assign the letter 'y' the /ē/ phoneme #27.

413

414

Fig. 11c

(Pass 14)

If the virtual word has the letter 'y', and
if the letter immediately preceding the letter 'y' is the letter 'a':
assign the letter 'y' the silence phoneme #0;
assign the letter 'a' the /ā/ phoneme #26;
light the block stations for both the 'a' and the 'y'.

414

(Pass 15)

If the last letter in the virtual word is a vowel, and
If there is only one vowel in the virtual word, then:
if the vowel is the letter 'e', assign the letter 'e' the /ē/ phoneme #27;
else if the vowel is the letter 'i', assign the letter 'i' the /i/ phoneme #28;
else if the vowel is the letter 'o', assign the letter 'o' the /ō/ phoneme #29.

415

(Pass 16)

If the virtual word has the letter 'h', and
if the letter 'h' is immediately preceded by the letter 'g', and
if the letter 'g' is immediately preceded by the letter 'i', then:
assign the silence phoneme #0 to both the letters 'g' and 'h';
assign the /i/ phoneme 28 to the letter 'i';
light the block stations for the letters 'i', 'g', and 'h'.

416

(Pass 17)

If the virtual word has the letter 'o', and
if the letter 'o' is immediately preceded by or immediately followed by another letter 'o',
then:
assign both letter 'o's the /ōō/ phoneme #43; and
light the block stations for both letter 'o's.

417

(Pass 18)

If the virtual word has the letter 'w', and
if the letter 'w' is immediately preceded by the letter 'e', then:
assign both letter 'e' and letter 'w' the /ōō/ phoneme #43; and
light the block stations for both letters.

418

419

FIG. 11d

(Pass 19)

If the virtual word has the letter 'u', and
if the letter 'u' is immediately followed by a consonant, and
if the consonant is immediately followed by the letter 'e', then:

assign the letter 'e' the silence phoneme #0;

assign the letter 'u' the /ōō/ phoneme #43; and

light the block station for the letter 'u' and the block station for the letter 'e'.

419

(Pass 20)

If the virtual word has the letter 'o', and
if the letter 'o' is immediately followed by the letter 'u', then:
assign the letters 'o' and 'u' the /ou/ phoneme #42.; and

light the block station for the letter 'o' and the block station for the letter 'u'.

420

(Pass 21)

If the virtual word has the letter 'g', and
if the letter 'g' is immediately followed by the letter 'n', then:
assign the letter 'g' the silence phoneme #0;

the letter 'n' defaults to its normal sound; and

light the block station for the letter 'g' and the block station for the letter 'n'.

421

(Pass 22)

If the virtual word has the letter 'y', and
if the letter 'y' is immediately preceded by the letter 'o', then:
assign the letter 'o' the /oi/ phoneme #41;

assign the letter 'y' the /oi/ phoneme #41; and

light the block station for the letter 'o' and the block station for the letter 'y'.

422

(Pass 23)

If the virtual word has the letter 'h', and
if the letter 'h' is directly preceded by the letter 'w', then:
assign the letter 'w' the /hw/ phoneme #24;

assign the letter 'h' the /hw/ phoneme #24; and

light the block station for the letter 'w' and the block station for the letter 'h'.

423

424

(Pass 24)

If the virtual word has two vowels, and
if the word ends in the letter 'e', and
if the letter that directly precedes the letter 'e' is a consonant, then:
 assign the letter 'e' the silence phoneme #0;
if the letter directly preceding the consonant is the letter 'a', assign the letter 'a' the /ā/
 phoneme #26;
else if the letter directly preceding the consonant is the letter 'e', assign the letter 'e' the
 /ē/ phoneme #27;
else if the letter directly preceding the consonant is the letter 'i', assign the letter 'i' the /ī/
 phoneme #28;
else if the letter directly preceding the consonant is the letter 'o', assign the letter 'o' the
 /ō/ phoneme #29;
else if the letter directly preceding the consonant is the letter 'u', assign the letter 'u' the
 /ū/ phoneme #43; and
light the block station for the letter 'e' and the block station for the vowel that directly
 precedes the consonant.

424

(Pass 25)

If the virtual word has two vowels, and
if the word ends in the letters 'ed', and
if the letter that directly precedes the letter 'e' is a consonant, then:
 assign the letter 'e' the silence phoneme #0;
if the letter directly preceding the consonant is the letter 'a', assign the letter 'a' the /ā/
 phoneme #26;
else if the letter directly preceding the consonant is the letter 'e', assign the letter 'e' the
 /ē/ phoneme #27;
else if the letter directly preceding the consonant is the letter 'i', assign the letter 'i' the /ī/
 phoneme #28;
else if the letter directly preceding the consonant is the letter 'o', assign the letter 'o' the
 /ō/ phoneme #29;
else if the letter directly preceding the consonant is the letter 'u', assign the letter 'u' the
 /ū/ phoneme #43; and
light the block station for the letter 'e' and the block station for the vowel that directly
 precedes the consonant.

425

426

Fig. 11f

(Pass 26)

If the virtual word has two vowels, and
if the word ends in the letters 'es', and
if the letter that directly precedes the letter 'e' is a consonant, then:
 assign the letter 'e' the silence phoneme #0;
if the letter directly preceding the consonant is the letter 'a', assign the letter 'a' the /ā/
 phoneme #26;
else if the letter directly preceding the consonant is the letter 'e', assign the letter 'e' the
 /ē/ phoneme #27;
else if the letter directly preceding the consonant is the letter 'i', assign the letter 'i' the /ī/
 phoneme #28;
else if the letter directly preceding the consonant is the letter 'o', assign the letter 'o' the
 /ō/ phoneme #29;
else if the letter directly preceding the consonant is the letter 'u', assign the letter 'u' the
 /ū/ phoneme #43; and
light the block station for the letter 'e' and the block station for the vowel that directly
 precedes the consonant.

426

(Pass 27)

If the virtual word has two vowels, and
if the word ends in the letters 'er', and
if the letter that directly precedes the letter 'e' is a consonant, then:
 assign the letter 'e' the /ū/ phoneme #38;
if the letter directly preceding the consonant is the letter 'a', assign the letter 'a' the /ā/
 phoneme #26;
else if the letter directly preceding the consonant is the letter 'e', assign the letter 'e' the
 /ē/ phoneme #27;
else if the letter directly preceding the consonant is the letter 'i', assign the letter 'i' the /ī/
 phoneme #28;
else if the letter directly preceding the consonant is the letter 'o', assign the letter 'o' the
 /ō/ phoneme #29;
else if the letter directly preceding the consonant is the letter 'u', assign the letter 'u' the
 /ū/ phoneme #43; and
light the block stations for the letters 'e' and 'i' and the block station for the vowel that
 directly precedes the consonant.

427

428

Fig. 11g

(Pass 28)

If the virtual word has the letter 'u', and
if the letter 'u' is directly preceded by the letter 'q', then:

assign the letter 'q' the /k/ phoneme #7;

assign the letter 'u' the /w/ phoneme #16; and

light the block station for the letter 'q' and the block station for the letter 'u'.

428

(Pass 29)

If the virtual word has the letter 'p', and
if the letter 'p' is directly followed by the letter 'h', then:

assign the letter 'p' the /f/ phoneme #3;

assign the letter 'h' the /f/ phoneme #3; and

light the block station for the letter 'p' and the block station for the letter 'h'.

429

(Pass 30)

If the virtual word has the letter 'n', and
if the letter 'n' is directly followed by the letter 'g', then:

assign the letter 'n' the /ng/ phoneme #25;

assign the letter 'g' the /ng/ phoneme #25; and

light the block station for the letter 'n' and the block station for the letter 'g'.

430

(Pass 31)

If the virtual word has the letter 's', and
if the letter 's' is directly followed by the letter 'h', then:

assign the letter 's' the /sh/ phoneme #20;

assign the letter 'h' the /sh/ phoneme #20; and

light the block station for the letter 's' and the block station for the letter 'h'.

431

(Pass 32)

If the virtual word has the letter 't', and
if the letter 't' is directly followed by the letter 'h', then:

assign the letter 't' the /th/ phoneme #22;

assign the letter 'h' the /th/ phoneme #22; and

light the block station for the letter 't' and the block station for the letter 'h'.

432

433

Fig. 11h

(Pass 33)

If the virtual word has the letter 'a', and
if the letter 'a' is directly followed by the letter 'w', then:
 assign the letter 'a' the /ô/ phoneme #40;
 assign the letter 'w' the /ô/ phoneme #40; and
light the block station for the letter 'a' and the block station for the letter 'w'.

433

(Pass 34)

If the virtual word has the letter 'a', and
if the letter 'a' is directly followed by the letter 'i', then:
 assign the letter 'a' the /â/ phoneme #26;
 assign the letter 'i' the /â/ phoneme #26; and
light the block station for the letter 'a' and the block station for the letter 'i'.

434

(Pass 35)

If the virtual word has the letter 'o', and
if the letter 'o' is directly followed by the letter 'a', then:
 assign the letter 'o' the /ô/ phoneme #29;
 assign the letter 'a' the /ô/ phoneme #29; and
light the block station for the letter 'o' and the block station for the letter 'a'.

435

(Pass 36)

If the virtual word has the letter 'e', and
if the letter 'e' is directly followed by the letter 'a', then:
 assign the letter 'e' the /ê/ phoneme #27;
 assign the letter 'a' the /ê/ phoneme #27; and
light the block station for the letter 'e' and the block station for the letter 'a'.

436

437

FIG. 11i

(Pass 37)

If the virtual word has the letter 'd', and
if the letter 'd' is directly preceded by the letter 'l',
and if the letter 'l' is directly preceded by the letter 'u', and
if the letter 'u' is directly preceded by the letter 'o', then:
assign the letter 'o' the /ōō/ phoneme #44;
assign the letter 'u' the /ōō/ phoneme #44;
assign the letter 'l' the silence phoneme #0;
assign the letter 'd' the /d/ phoneme #2; and
light the block stations for the letters 'o', 'u', 'l', and 'd'.

437

(Pass 38)

If the virtual word has the letter 'n', and
if the letter 'n' is directly preceded by the letter 'o',
and if the letter 'o' is directly preceded by the letter 'i', and
if the letter 'i' is directly preceded by the letter 't', then:
assign the letter 't' the /sh/ phoneme #20;
assign the letter 'i' the /sh/ phoneme #20;
assign the letter 'o' the /ə/ phoneme #36;
assign the letter 'n' the /n/ phoneme #10; and
light the block stations for the letters 't', 'i', 'o', and 'n'.

438

(Pass 39)

If the virtual word has the letter 'n', and
if the letter 'n' is directly preceded by the letter 'o',
and if the letter 'o' is directly preceded by the letter 'i', and
if the letter 'i' is directly preceded by the letter 's', then:
assign the letter 's' the /sh/ phoneme #20;
assign the letter 'i' the /sh/ phoneme #20;
assign the letter 'o' the /ə/ phoneme #36;
assign the letter 'n' the /n/ phoneme #10; and
light the block stations for the letters 's', 'i', 'o', and 'n'.

439

HNO

FIG. 11j

(Pass 40)

If the virtual word has the letter 'c', and
if the letter 'c' is directly preceded by or directly followed by another letter 'c',
and if the two letter 'c's are directly followed by the letter 'e', or the letter 'i', then:

assign the first letter 'c' the /k/ phoneme #7;

assign the second letter 'c' the /s/ phoneme #13; and

light the block stations for the first letter 'c', the second letter 'c', and the letter 'e' or 'i'

440

(Pass 41)

If the virtual word has the letter 'o', and
if the letter 'o' is directly followed by the letter 'i', then:

assign the letter 'o' the /oi/ phoneme #41;

assign the letter 'i' the /oi/ phoneme #41; and

light the block station for the letter 'e' and the block station for the letter 'i'.

441

(Pass 42)

If the last letter of the virtual word is the letter 's', then:

assign the letter 's' the /z/ phoneme #18.

442

(Pass 43)

If the virtual word has the letter 'h', and
if the letter 'h' is directly preceded by the letter 'c',
and if the letter 'c' is directly preceded by the letter 't', then:

assign the letter 't' the silence phoneme #0; and

light the block stations for the letters 't', 'c', and 'h'.

443

(Pass 44)

If the virtual word has the letter 'r' or the letter 'k', and
if the letter 'h' immediately follows the letter 'r', or the letter 'k', then:

assign the letter 'h' the silence phoneme #0; and

light the block stations for the letter 'h', and the letter 'k' or 'r'.

444

445

Fig. 11k

(Pass 45)

If the virtual word has the letter 'm', and
if the letter 'm' is directly followed by the letter 'b', then:
assign the letter 'b' the silence phoneme #0; and
light the block stations for the letters 'm', and 'b'.

445

(Pass 46)

If the virtual word has the letter 'k' or the letter 'm', and
if the letter 'l' immediately precedes the letter 'k', or the letter 'm', then:
assign the letter 'l' the silence phoneme #0; and
light the block stations for the letter 'l', and the letter 'm' or 'k'.

446

(Pass 47)

If the virtual word has the letter 'b', and
if the letter 'b' is directly followed by the letter 't', then:
assign the letter 'b' the silence phoneme #0; and
light the block stations for the letter 'b', and the letter 't'.

447

(Pass 48)

If the virtual word has the letter 'm', and
if the letter 'm' is directly followed by the letter 'n', then:
assign the letter 'n' the silence phoneme #0; and
light the block stations for the letter 'm', and the letter 'n'.

448

(Pass 49)

If the last letter in the virtual word is 'h', and
if the letter 'h' is directly preceded by a vowel, then;
assign the letter 'h' the silence phoneme #0; and
light the block stations for the letter 'h', and the vowel that precedes the letter 'h'.

449

450

FIG. 111

(Pass 50)

If the first letter in the virtual word is 'w', and
if the letter directly following the letter 'w' is the letter 'h', and
if the letter directly following the letter 'h' is the letter 'o', then:
assign the letter 'w' the silence phoneme #0; and
light the block stations for the letters 'w', 'h', and 'o'.

450

(Pass 100)

If the virtual word has the letter 'd', and
if the letter 'd' is directly followed by the letter 'g'; or the letter 'j', then:
assign the letter 'd' the silence phoneme #0; and
light the block stations for the letter 'd', and the letter 'g' or 'j'.

451

(Pass 101)

If the last letter in the virtual word is 'm', and
if the letter 'm' is directly preceded by the letter 's', then;
assign the letter 's' the /z/ phoneme #18; and
light the block stations for the letter 's' and the letter 'm'.

452

Fig. 11m

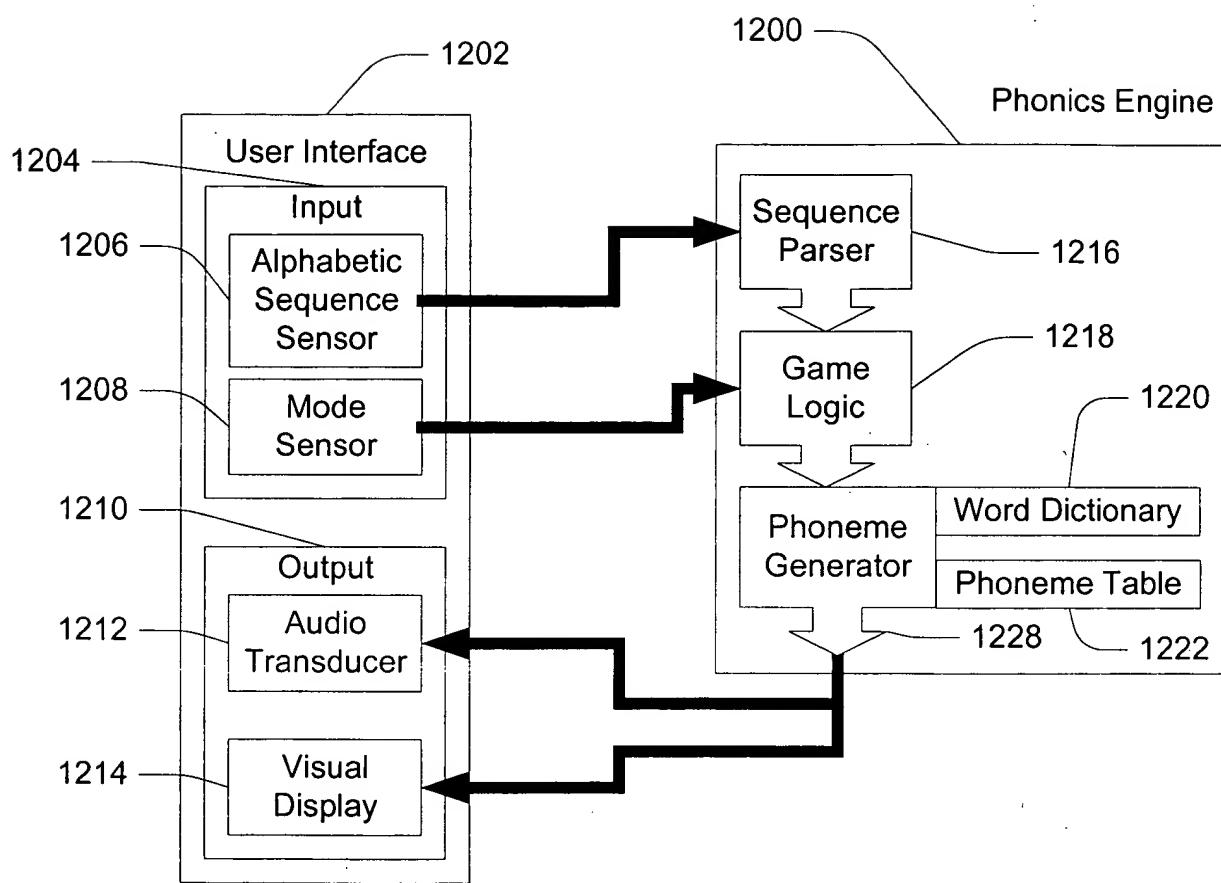
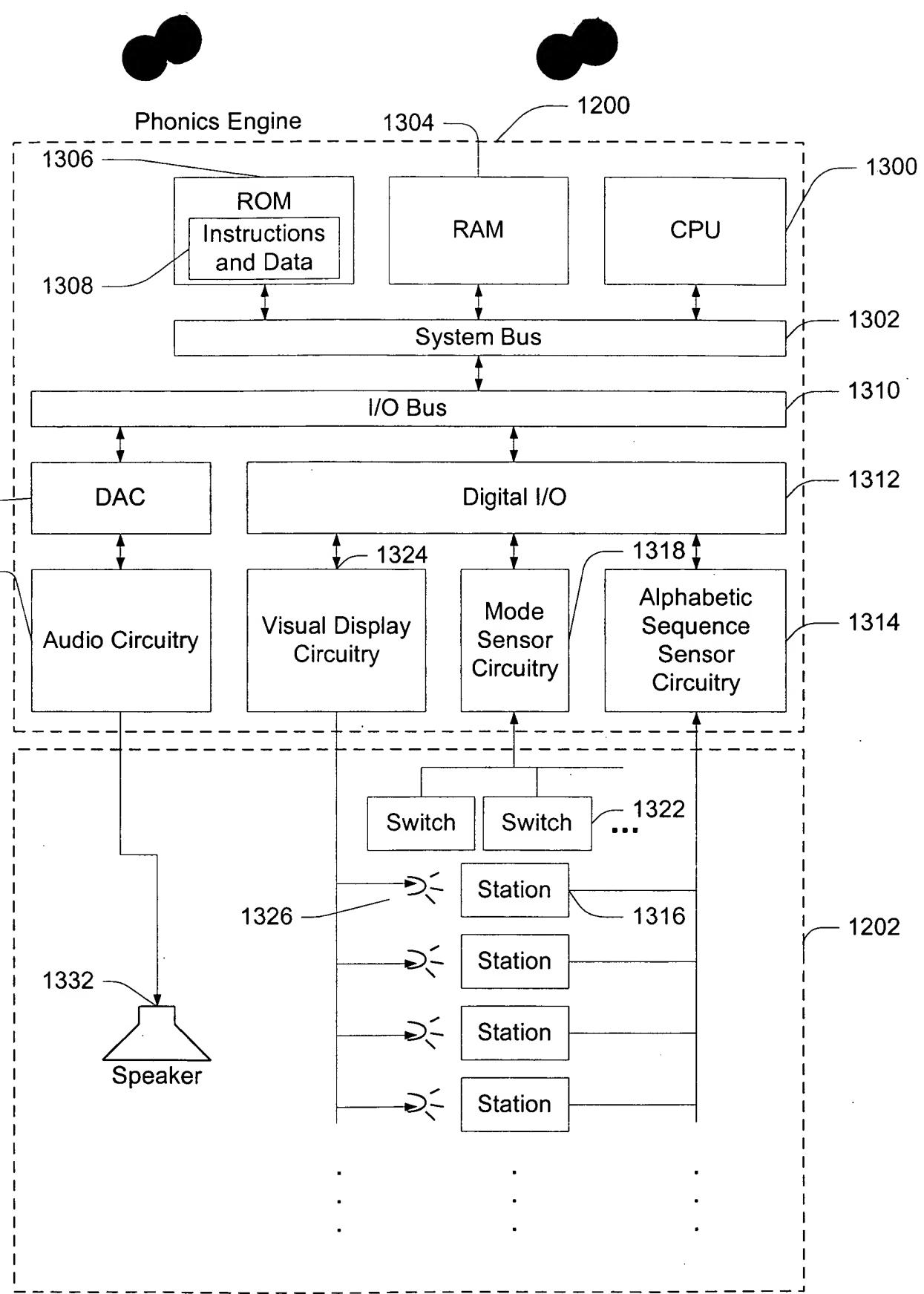


FIG. 12

706020-120082600



User Interface

FIG. 13

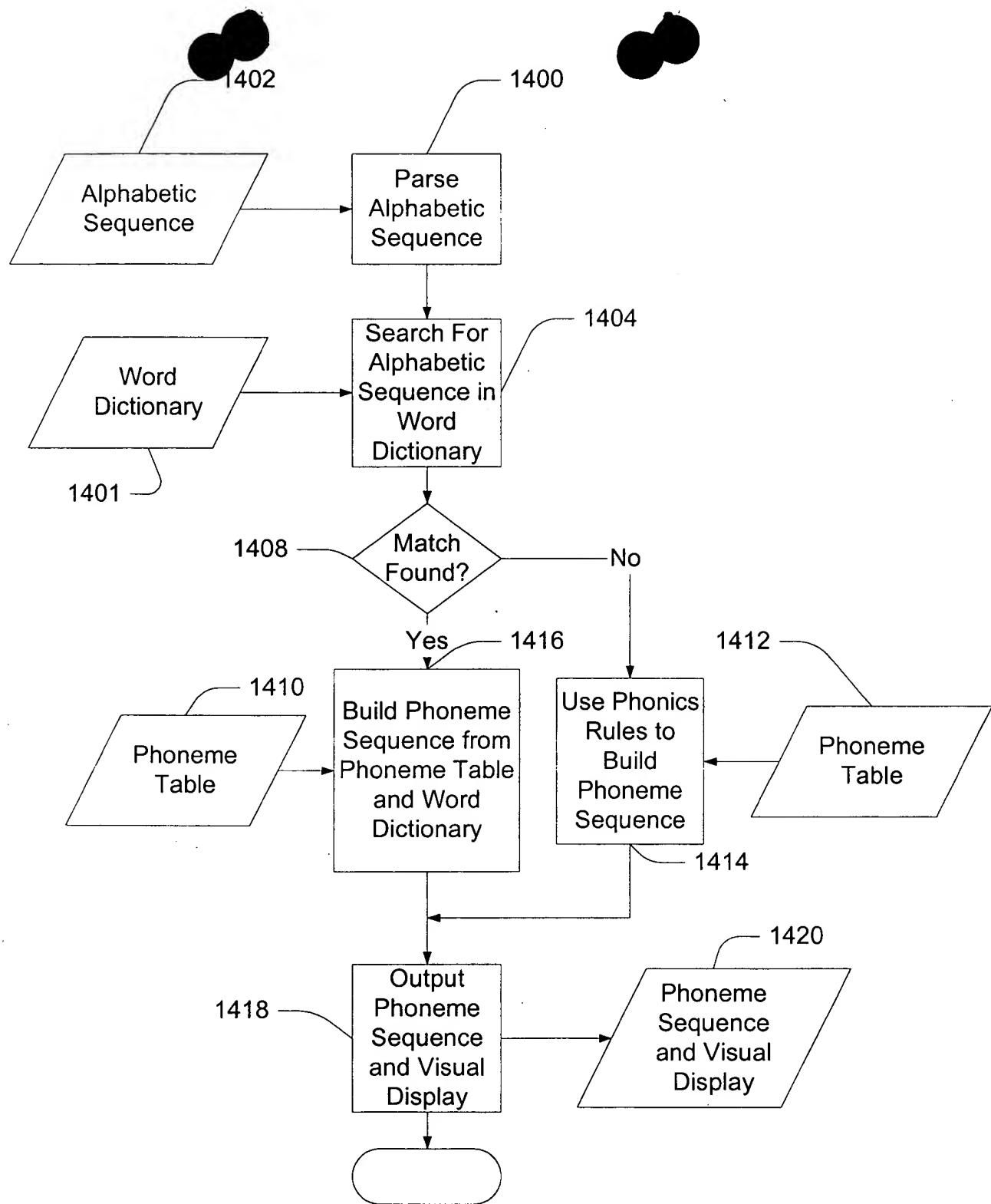


FIG. 14

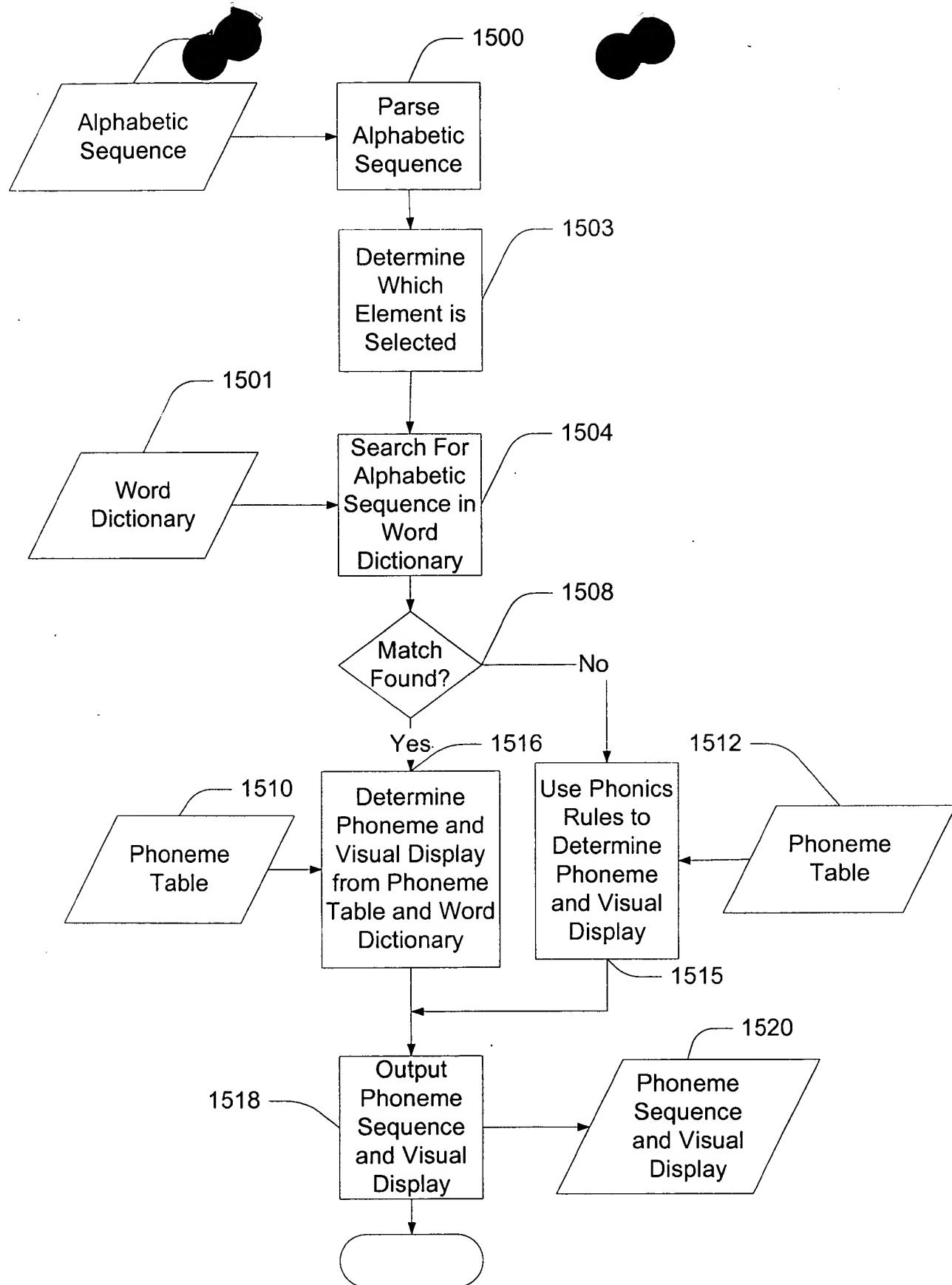


FIG. 15